clarion

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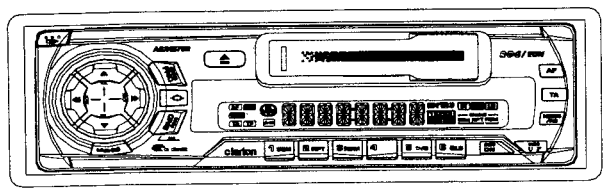
Service Manual



RDS-EON/FM-MPX/MW/LW Radio Cassette Combination With CD/MD Changer Control

Model ***ARX4570R***

(PE-1654E-A)

■ SPECIFICATIONS

Radio section

Tuning system:	PLL synthesizer tuner
Receiving frequencies:	FM 87.5MHz to 108MHz (0.05MHz steps)
	MW 531kHz to 1602kHz (9kHz steps)
	LW 153kHz to 279kHz (3kHz steps)

Tape deck section

Cassette type:	Compact audio cassette
Wow & flutter:	0.06%(WRMS)
Frequency response:	30Hz to 20kHz(Metal)
Signal to noise ratio:	Metal:58dB

General

Max. power output:	4 × 40W
Power supply voltage:	14V DC(10.8 to 15.6V allowable), negative ground
Power consumption:	Less than 15A
Speaker impedance:	4 Ω (4 Ω to 8 Ω allowable)
Auto antenna rated current:	500mA or less
Weight:	Main unit 1.3kg
	Remote control unit 30g (including battery)
Dimensions(mm):	Main unit 178(W)×50(H)×152(D)
	Remote control unit 44(W)×110(H)×27(D)

※Specifications and design are subject to change without notice for further improvement.

■ NOTE

※We cannot supply PWB with component parts in principle. When a circuit on PWB has failure, please repair it by component parts base. Parts which are not mentioned in service manual are not supplied.

■ COMPONENTS

PE-1654E-A

Main unit	————	1
Remote controller	RCB-130-700	1
Battery(SUM-3)	————	2
Mounting bracket	300-7745-00	1
DCP case	335-6035-02	1
Escutcheon(OUT-ES)	370-5813-00	1
Parts bag	————	
Removal tool	331-2548-00	2
Cord clamp	335-0833-01	1
Rubber cap	345-3653-01	1
Screw	716-0726-01	1
A-lead(for cellular phone)	850-6681-00	1

■ FEATURES

1. RDS-Pro Receiver with EON, PS, AF, TA, TP, REG and PTY News
2. Full Logic Auto Reverse Cassette Deck
3. Controller for MD or CD Changer (6/12 Discs)
4. High Power 4×40W Max. / 2-Channel RCA Line Level Output
5. Fully Detachable Control Panel with Protective Case
6. Ready for Infrared Remote Control (RCB-130-700)

■To engineers in charge of repair or inspection of our products.

Before repair or inspection, make sure to follow the instructions so that customers and Engineers in charge of repair or inspection can avoid suffering any risk or injury.

1. Use specified parts.
   The system uses parts with special safety features against fire and voltage. Use only parts with equivalent characteristics when replacing them.
   The use of unspecified parts shall be regarded as remodeling for which we shall not be liable. The onus of product liability (PL) shall not be our responsibility in cases where an accident or failure is as a result of unspecified parts being used.
2. Place the parts and wiring back in their original positions after replacement or re-wiring.
   For proper circuit construction, use of insulationtubes, bonding, gaps to PWB, etc, is involved. The wiring connection and routing to the PWB are specially planned using clamps to keep away from heated and high voltage parts. Ensure that they are placed back in their original positions after repair or inspection.
   If extended damage is caused due to negligence during repair, the legal responsibility shall be with the repairing company.
3. Check for safety after repair.
   Check that the screws, parts and wires are put back securely in their original position after repair. Ensure for safety reasons there is no possibility of secondary ploblems around the repaired spots.
   If extended damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
4. Caution in removal and making wiring connection to the parts for the automobile.
   Disconnect the battery terminal after turning the ignition key off. If wrong wiring connections are made with the battery connected, a short circuit and/or fire may occur. If extensive damage is caused due to negligence of repair, the legal responsibility shall be with the repairing company.
   5.Cautions regarding chips.
   Do not reuse removed chips even when no abnormality is observed in their appearance. Always replace them with new ones. (The chip parts include resistors, capacitors, diodes, transistors, etc). The negative pole of tantalum capacitors is highly susceptible to heat, so use special care when replacing them and check the operation afterwards.
6. Cautions in handing flexible PWB
   Before working with a soldering iron, make sure that the iron tip temperature is around 270℃. Take care not to apply the iron tip repeatedly (more than three times) to the same patterns. Also take care not to apply the tip with force.
7. Turn the unit OFF during disassembly and parts replacement. Recheck all work before you apply power to the unit.

■NOTE OF ISO CONNECTOR

1. For VW and Audi vehicles, change the position of fuse installation as shown on the diagram. (Figure 1)

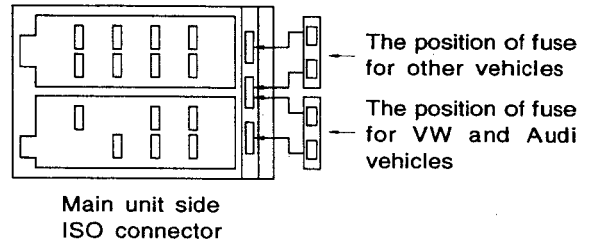


Figure 1

2. The lead include with the unit must be connected to the specified position of the vehicle's ISO connector in order to use the "triggered audio mute for cellular telephones" function. (Figure 2)

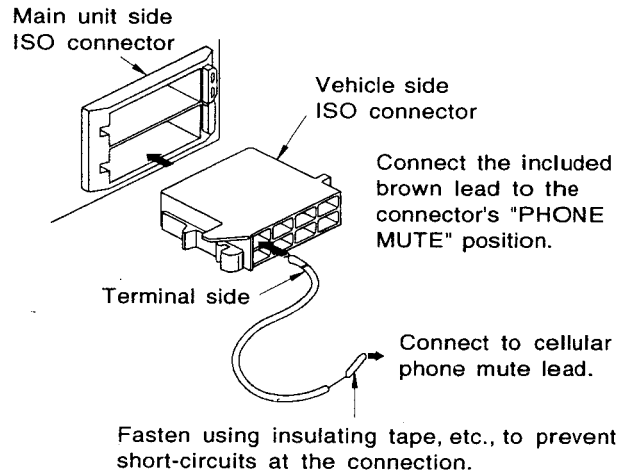

Main unit side ISO connector
Vehicle side ISO connector
Connect the included brown lead to the connector's "PHONE MUTE" position.
Terminal side
Connect to cellular phone mute lead.
Fasten using insulating tape, etc., to prevent short-circuits at the connection.

Figure 2

■TROUBLESHOOTING

Problem	Cause	Measure
Power dose not turn on. (or no sound is produced.)	Fuse is blown.	Replace with a fuse of the same amperage as the old fuse.
	Connections are improper.	Read the attached "Installation/Wire Connection Guide" once again and wire properly.
Sound quality is poor.	Playback head is dirty.	Use a cleaning tape, etc. to clean the head.
No sound while unit can be operated.	Power ANT lead is shorted to the ground.	Turn the unit off, first. Remove all connecting wires from the power ANT lead, and turn the unit on, then re-connect a wire one by one to the power ANT lead. When sound is muted again, check the unit with a wire connected last.

■ERROR DISPLAYS

This unit is equipped with a number of self-diagnosis functions to protect the system. If a problem should occur, the user is warned through various error displays. Eliminate the problem using the procedures shown below.

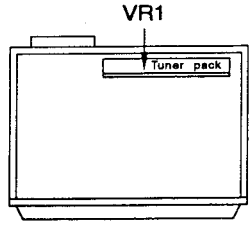
Error Display	Procedure
E r- 2	This indicates that a problem has occurred with the CD/MD changer's mechanism (disc cannot be changed or ejected, etc.). →The CD/MD changer mechanism is likely damaged. Contact your store of purchase.
E r- 3	This indicates that the pickup is out of focus during playback due to scratches on the disc, etc.
E r- 6	This indicates that the CD's/MD's TOC (table of contents) cannot be read, for example because the selected disc is upside down.
E r- 8	This is displayed if a cassette tape gets stuck during loading or ejecting. →Remove the cause for which the cassette tape got stuck.

If a display other than one of the displays above appears, press the reset button. If the problem persists, turn the power off and contact your store of purchase.

■ADJUSTMENTS

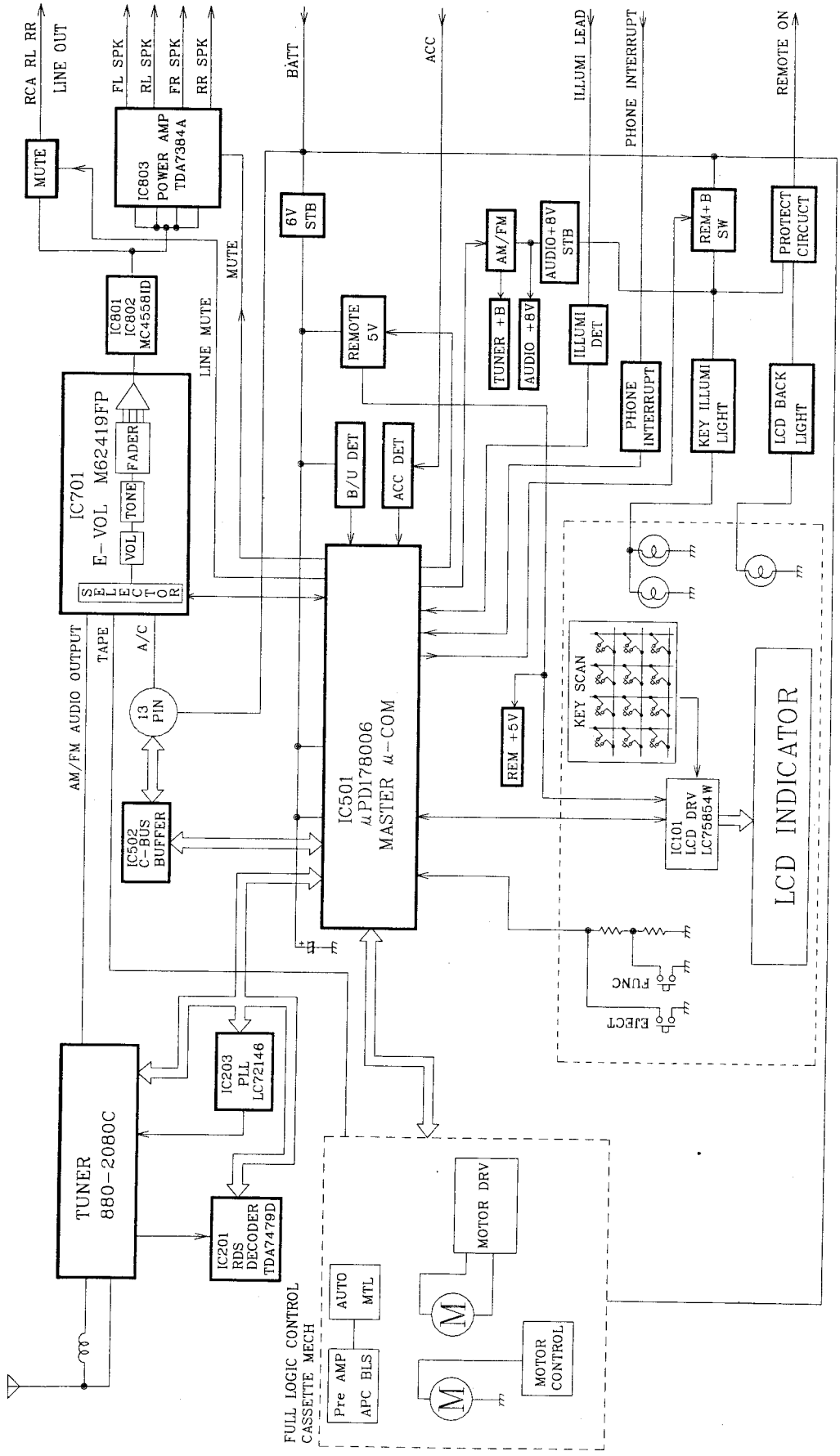
Item	Procedure	Measuring instrument
S-meter	1.Input the 98.1MHz/30dB μ (400Hz-MOD 30%) signal. 2.Turn on the power switch. And press the AF button and CH6 button at the same time. (TEST MODE) 3.Adjust the reading of LCD indicator to [30----00] (3.0V $\pm$ 0.2V) by VR1.	SG

Adjustment point



Top side of main unit

■BLOCK DIAGRAM



■ EXPLANATION OF IC:

■UPD178006AGC-520-3B9 052-1906-10 MASTER MICRO COMPUTER

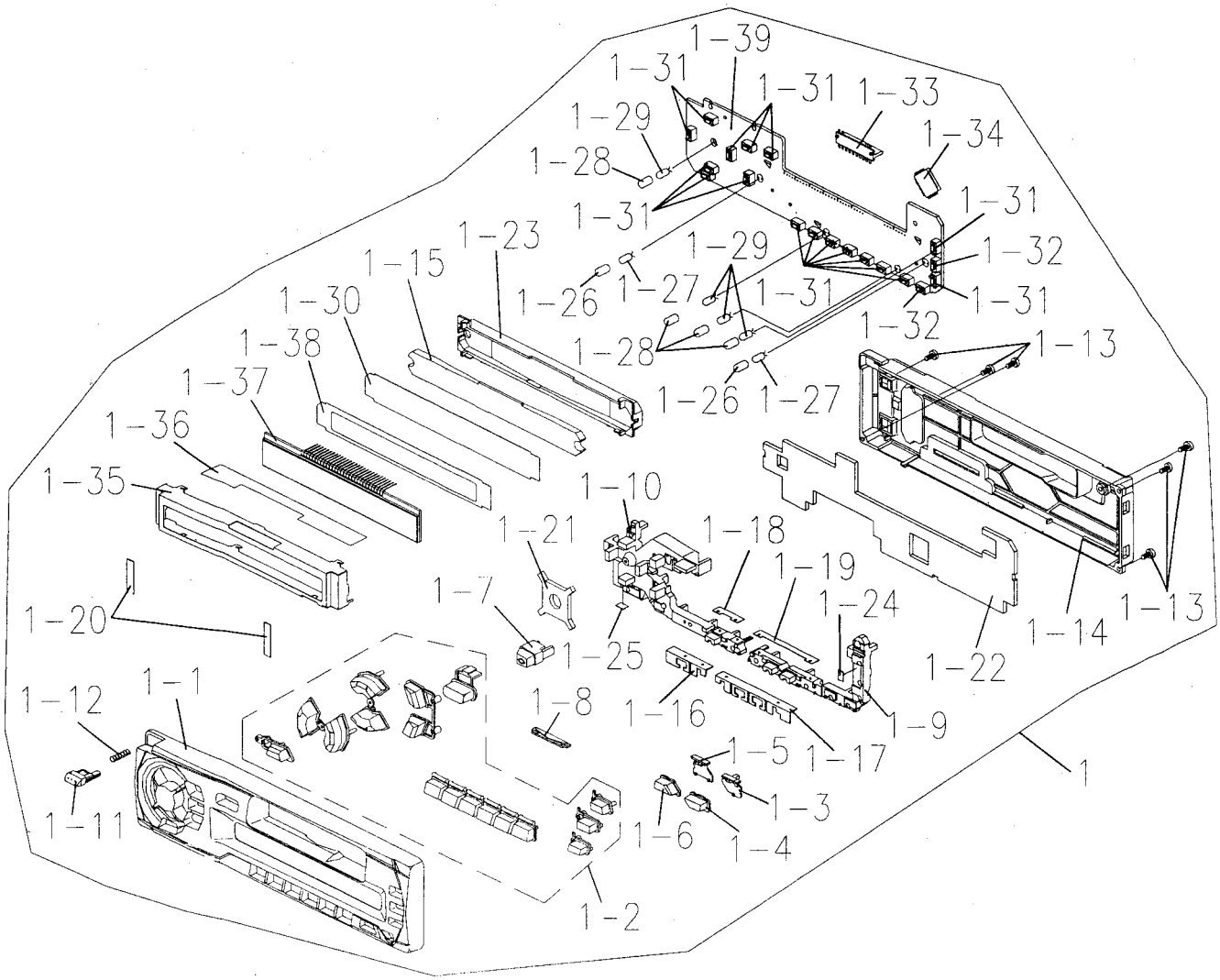
1.Outward Form : 80 pins QFP

2.Terminal Description

pin 1 : GND : — : GND
pin 2 : KEY-A/D : IN : Terminal for A/D convert. Connect GND detects DCP/FNC/EJE KEY.
pin 3 : RDS S-METER : IN : RDS S-METER voltage detection.
pin 4 : RDS NOISE : IN : RDS noise detection.
pin 5 : PLL DO : IN : PLL IC control line .
pin 6 : RDS DISCHGE : O : RDS output terminal for discharging the voltage detected by RDS NOISE.
pin 7 : LCD SI : IN : Serial data communication line with driver.
pin 8 : LCD SO : O : Serial data communication line with driver.
pin 9 : LCD SCK : O : Serial data communication line with driver.
pin 10 : LCD CE : O : Serial data communication line with driver.
pin 11 : C-BUS SRQ : IN : C-BUS data communication line.
pin 12 : C-BUS SI : IN : C-BUS data communication line.
pin 13 : C-BUS SO : O : C-BUS data communication line.
pin 14 : C-BUS SCK : O : C-BUS data communication line.
pin 15 : NC : — : NC
pin 16 : PLL SCK : O : PLL IC control line.
pin 17 : PLL DI : O : PLL IC control line.
pin 18 : +B REM : O : Outputs Hi by power ON, supplying +B power.
pin 19 : SYS MUTE : O : Outputs terminal for system mute signal.
pin 20 : MECH ON : O : Outputs "H" when tape operation is necessary.
pin 21 : GND PO : — : GND
pin 22 : VDD PO : — : Power supply voltage terminal.
pin 23 : AM Local : O : Switches AM DX/LO Hi when local.
pin 24 : MECH MOTOR : O : Outputs signal for MECH MOTOR.
pin 25 : RDS MUTE : O : RDS output terminal for noise reduction during follow-up motion.
pin 26 : REM +5 : O : Outputs signal for 5V power ON around micro computer.
pin 27 : NC : IN : NC
pin 28 : AM IFC : IN : NC
pin 29 : FM IFC : IN : NC
pin 30 : PLL VDD : — : PLL power supply terminal.
pin 31 : FM IN : IN : NC
pin 32 : AM IF : IN : NC
pin 33 : PLL GND : — : PLL GND terminal.
pin 34 : EO0 : O : NC
pin 35 : EO1 : O : NC
pin 36 : Vpp : — : GND
pin 37 : PLL CE : O : PLL IC control line.
pin 38 : PLL LOCK : O : NC
pin 39 : Initial Setting : O : BLINK LED "L"=ON
pin 40 : IF REQ : O : FM diversity output terminal. Outputs Hi in RADIO mode. FM, diver ON; outputs low in diver OFF.
pin 41 : FM SD : IN : Detection terminal for FM SD. Judges SD ON by Hi.
pin 42 : $\overline{\text{FM ST}}$: IN : Detecting terminal for FM stereo indicator.
pin 43 : AM SD : IN : Detection terminal for AM SD. Judges SD ON by Hi.
pin 44 : ACC CONT : O : ACC CONT signal output terminal.
pin 45 : RDS +B REM : O : Spare terminal for RDS decoder power ON.
pin 46 : BLINK LED : O : LED flashing output signal.
pin 47 : FM Local : O : Switches FM DX/LO Hi when local.
pin 48 : PI CHECK : O : Power motor control terminal to shift the mechanism to the set mode.
pin 49 : EVOL CLK : O : Serial data communication line to electronic volume IC.
pin 50 : EVOL DATA : O : Serial data communication line to electronic volume IC.
pin 51 : Initial Setting : IN : B NR "L"=ON
pin 52 : MTL SW : IN : Inputs detection signal for auto metal switch.
pin 53 : MTL ON : O : Outputs Hi in using metal tape.
pin 54 : DOLBY ON : O : NC
pin 55 : REEL PULSE : IN : Reel pulse input.
pin 56 : TAPE IN : IN : Inputs detection signal for tape loading start.
pin 57 : BIT 3 : IN : Input terminal for mechanism mode detection switch. The switch is 3 bit rotary switch.
pin 58 : BIT 1 : IN : Input terminal for mechanism mode detection switch. The switch is 1 bit rotary switch.
pin 59 : BIT 2 : IN : Input terminal for mechanism mode detection switch. The switch is 2 bit rotary switch.
pin 60 : APC SENS : O : Outputs switching signal for APC circuit sensitivity, outputs Hi in FF/REW.
pin 61 : APC DET : IN : Inputs Hi in REVERSE.
pin 62 : NC : O : NC
pin 63 : FWD/REV : O : Outputs signal for forward/reverse switching.
pin 64 : P2 : O : Power motor control terminal to shift the mechanism to the set mode.
pin 65 : P1 : O : Power motor control terminal to shift the mechanism to the set mode.
pin 66 : RDS DATA : IN : Inputs DATA from RDS detector.
pin 67 : RDS CLK : IN : Clock signal input from RDS detector.
pin 68 : $\overline{\text{B/U DET}}$: IN : When this terminal turns low, micro computer detects the B/U OFF and turns micro computer to STOP mode, stopping oscillation.
pin 69 : ACC DET : IN : ON/OFF detection terminal for ACC power supply.
pin 70 : REMOCON : IN : IR REMOCON input.
pin 71 : $\overline{\text{KEY INT}}$: IN : KEY insertion input terminal low when EJECT KEY or FNC (POWER) KEY pushed when this terminal turns low. KEY A/D terminal detects the KEY pushed.
pin 72 : NC : O : NC
pin 73 : PHONE INT : IN : Input terminal for phone interrupt/cellular.
pin 74 : REG CPU : — : Regulator terminal for CPU power supply. Connected to pass Con against noise.
pin 75 : GND : — : GND
pin 76 : X2 : — : Connecting terminal for oscillating crystal for main system clock.
pin 77 : X1 : IN : Connecting terminal for oscillating crystal for main system clock.
pin 78 : REQ OSC : — : Power supply regulator terminal for oscillator. Connected to pass Con against noise.
pin 79 : VDD : — : Power supply terminal.
pin 80 : $\overline{\text{RESET}}$: IN : Micro computer will stop by turning this terminal to "LOW".

■ EXPLODED VIEW • PATRS LIST:

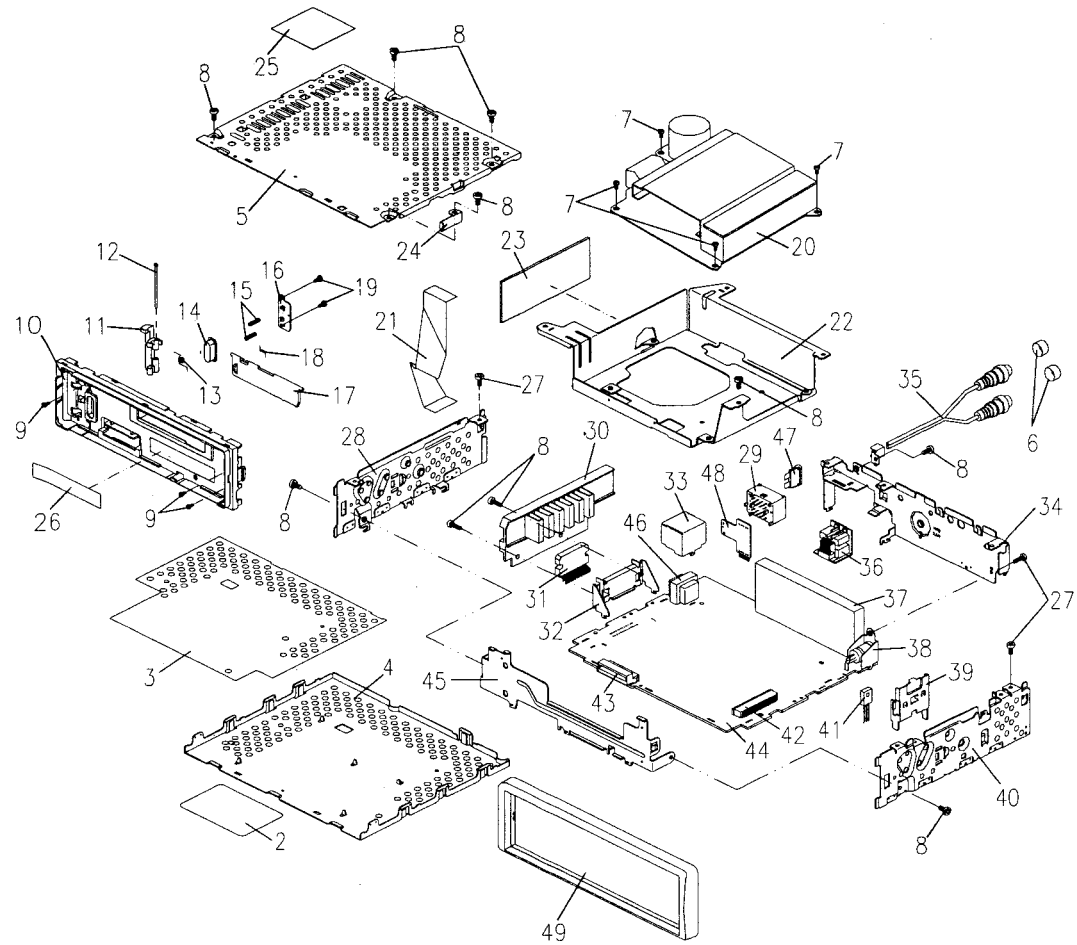
DCP Section



NO.	PARTS NO.	DESCRIPTION	Q'TY
1	DCY-164-700	DCP ASSY	1
1-1	370-5805-00	ESCUTCHEON	1
1-2	947-0491-03	BUTTON ASSY	1
1-3	335-5961-00	BUTTON HOLDER	1
1-4	382-5326-00	BUTTON	1
1-5	335-5962-00	BUTTON HOLDER	1
1-6	382-5327-00	BUTTON	1
1-7	335-5960-00	IR-FILTER	1
1-8	335-5970-00	ILLUMI. PLATE	1
1-9	335-5965-00	ILLUMI. PLATE	1
1-10	335-5971-00	ILLUMI. PLATE	1
1-11	382-5325-00	BUTTON	1
1-12	750-3326-00	SPRING	1
1-13	716-1721-00	P-TIGHT-SCREW	6
1-14	335-5974-00	REAR-CVR	1
1-15	335-5972-00	LCD ILLUMI.	1
1-16	347-5839-01	FILM HOLDER	1
1-17	347-5840-01	FILM HOLDER	1
1-18	347-5842-00	DOUBLE FACE	1
1-19	347-5843-00	DOUBLE FACE	1
1-20	347-5846-00	SHADE	2

NO.	PARTS NO.	DESCRIPTION	Q'TY
1-21	345-8340-01	SPONGE	1
1-22	345-8342-01	SPONGE	1
1-23	335-5973-00	LCD HOLDER	1
1-24	347-6064-00	SHADE	1
1-25	347-6065-00	SHADE	1
1-26	345-4441-81	LAMP CAP	2
1-27	017-0441-00	PLOT LAMP	2
1-28	345-4441-63	LAMP CAP	4
1-29	017-0410-00	PLOT LAMP	4
1-30	347-5848-00	FILM	1
1-31	013-6305-50	SWITCH	17
1-32	013-6001-50	TACT SWITCH	2
1-33	076-0615-00	PLUG	1
1-34	051-6013-00	IC	1
1-35	331-2605-00	LCD COVER	1
1-36	347-5933-01	INSULATOR	1
1-37	379-1150-41	INDICATOR	1
1-38	347-5849-00	SHADE	1
1-39	039-1397-00	SWITCH PWB (WITHOUT COMPONENT)	1

Main Section



NO.	PARTS NO.	DESCRIPTION	Q'TY
2	286-9202-00	SETPLATE	1
3	347-5918-10	INSULATOR	1
4	304-0462-00	LOWER COVER	1
5	303-0473-00	UPPER COVER	1
6	345-3799-00	RUBBER CAP	2
7	714-2605-81	MACHINE SCREW	4
8	731-3006-80	TAP-TIGHT SCREW	10
9	780-2004-01	SCREW	3
10	370-5806-00	IN-ESCUTCHEON	1
11	335-5968-00	HOOK	1
12	341-1627-00	SHAFT	1
13	750-3219-00	SPRING	1
14	382-5329-00	BUTTON	1
15	750-3173-00	SPRING	2
16	331-2603-00	HOOK PLATE	1
17	320-0562-00	DUSTPROOF-CVR	1
18	750-3343-00	SPRING	1
19	716-0778-00	WAVE SCREW	2
20	930-0798-80	TAPE-MECHANISM	1
21	816-2478-00	FLAT CABLE	1
22	331-2495-01	MECH-BRKT	1
23	347-6056-00	FILM	1
24	331-2744-00	STOPPER	1
25	291-0083-00	STICKER	1
26	291-0067-00	STICKER	1

NO.	PARTS NO.	DESCRIPTION	Q'TY
27	714-3006-81	MACHINE SCREW	3
28	305-0276-00	SIDE-CVR	1
29	074-1115-00	OUTLET SOCKET	1
30	313-1746-00	HEAT SINK	1
31	051-2029-00	IC	1
32	331-2547-00	IC HOLDER	1
33	331-2549-00	SHIELD CASE	1
34	307-0627-00	REAR COVER	1
35	855-5426-80	RCA PIN CORD	1
36	074-1126-10	OUTLET SOCKET	1
37	880-2080C	TUNER	1
38	092-9000-41	ANT RECEPT	1
39	313-1747-00	HEAT SINK	1
40	305-0277-00	SIDE-CVR	1
41	102-1846-50	TRANSISTOR	1
42	074-0986-22	OUTLET SOCKET	1
43	074-1217-00	OUTLET SOCKET	1
44	039-1396-00	MAIN PWB (WITHOUT COMPONENT)	1
45	309-0722-00	FRONT PLATE	1
46	009-9006-20	CHOKE	1
47	060-0057-57	AUTO-FUSE(15A)	1
48	039-1400-00	PWB (WITHOUT COMPONENT)	1
49	370-5813-00	OUT-ESCUTCHEON	1

■ ELECTRICAL PARTS LIST:

Main PWB (B2) section

REF No.	PART No.	DESCRIPTION
IC 201	051-1819-50	TDA7479D
IC 202	051-3028-90	MC4558ID
IC 203	051-6201-00	LC72146M
IC 501	052-1906-10	UPD178006
IC 502	051-7400-08	HD74LS07
IC 701	051-5008-00	M62419FP
IC 801	051-3028-90	MC4558ID
IC 802	051-3028-90	MC4558ID
IC 803	051-2029-00	TDA7384
Q 101	108-0669-00	2SK669
Q 102	100-1162-00	2SA1162
Q 103	100-1162-00	2SA1162
Q 201	125-0024-02	MUN2111T1
Q 202	103-1306-00	2SD1306
Q 203	125-0024-02	MUN2111T1
Q 204	125-2031-02	MUN2211T1
Q 205	125-2031-02	MUN2211T1
Q 301	101-1243-00	2SB1243
Q 302	125-2004-06	RN1406
Q 303	103-1802-60	2SD1802FA
Q 304	125-0024-02	MUN2111T1
Q 305	125-2031-03	MUN2212T1
Q 501	125-0024-02	MUN2111T1
Q 502	102-2712-00	2SC2712
Q 503	100-1162-00	2SA1162
Q 504	125-2031-02	MUN2211T1
Q 601	101-1237-00	2SB1237
Q 602	102-1846-50	2SC1846
Q 603	103-1858-00	2SD1858
Q 604	103-1858-00	2SD1858
Q 605	103-1858-00	2SD1858
Q 606	103-1858-00	2SD1858
Q 607	125-0024-02	MUN2111T1
Q 608	102-2712-00	2SC2712
Q 609	101-1243-00	2SB1243
Q 610	125-2031-02	MUN2211T1
Q 611	100-1162-00	2SA1162
Q 612	101-1237-00	2SB1237
Q 613	125-2031-02	MUN2211T1
Q 614	125-2031-02	MUN2211T1
Q 615	125-2031-02	MUN2211T1
Q 618	125-2031-02	MUN2211T1
Q 619	125-0024-02	MUN2111T1
Q 620	108-0241-50	2SK241
Q 803	103-1306-00	2SD1306
Q 804	103-1306-00	2SD1306
Q 805	125-2031-02	MUN2211T1
Q 806	125-0024-02	MUN2111T1
D 201	001-0516-00	MA111
D 202	001-0516-00	MA111
D 301	001-0528-48	MA8091H
D 302	001-0516-00	MA111

REF No.	PART No.	DESCRIPTION
D 501	001-0516-00	MA111
D 503	001-0516-00	MA111
D 504	001-0516-00	MA111
D 505	001-0516-00	MA111
D 506	001-0516-00	MA111
D 601	001-0528-33	MA8056H
D 602	001-0516-00	MA111
D 603	001-0516-00	MA111
D 604	001-0528-47	MA8091M
D 605	001-0376-48	MTZ9.1JC
D 606	001-0528-36	MA8062H
D 608	001-0376-45	MTZ8.2JC
D 609	001-0516-00	MA111
D 610	001-0516-00	MA111
D 611	001-0466-00	S5688B
D 613	001-0466-00	S5688B
D 614	001-0466-00	S5688B
D 701	001-0528-23	MA8043M
D 803	001-0592-00	RM4Z
D 804	001-0466-00	S5688B
D 805	001-0466-00	S5688B
D 806	001-0466-00	S5688B
D 807	001-0466-00	S5688B
D 808	001-0466-00	S5688B
D 809	001-0466-00	S5688B
D 810	001-0466-00	S5688B
D 811	001-0466-00	S5688B
D 998	001-0516-00	MA111
L 101	010-2330-17	5.6 μH
L 102	010-2330-17	5.6 μH
L 201	010-2330-33	120 μH
L 301	010-2330-24	22 μH
L 501	010-2330-33	120 μH
L 502	010-2330-33	120 μH
L 503	010-2330-10	1.5 μH
L 601	010-2330-33	120 μH
L 801	009-9006-20	CHOKE
X 201	061-3013-00	4.332 MHz
X 202	061-1066-00	7.2MHz
X 501	060-1023-00	4.5MHz
C 001	178-1032-05	25V 0.01 μF
C 002	176-4701-00	50V 47PF
C 099	178-1032-05	25V 0.01 μF
C 101	176-1801-00	50V 18PF
C 102	178-1032-05	25V 0.01 μF
C 103	178-1032-05	25V 0.01 μF
C 104	183-1073-22	10V 100 μF
C 106	163-1053-60	50V 1 μF
C 107	178-2732-05	25V 0.027 μF
C 108	178-2732-05	25V 0.027 μF
C 109	178-1522-05	50V 1500PF
C 110	178-1032-05	25V 0.01 μF

REF No.	PART No.	DESCRIPTION
C 111	178-6822-05	50V 6800PF
C 112	178-1032-05	25V 0.01 μF
C 113	178-1032-05	25V 0.01 μF
C 114	183-1073-22	10V 100 μF
C 115	178-1222-05	50V 1200PF
C 116	178-4732-05	25V 0.047 μF
C 117	163-3343-60	50V 0.33 μF
C 118	178-1032-05	25V 0.01 μF
C 144	178-8222-05	50V 8200PF
C 202	176-3311-00	50V 330PF
C 203	176-8201-00	50V 82PF
C 204	176-4701-00	50V 47PF
C 205	178-1042-05	25V 0.1 μF
C 206	163-2253-60	50V 2.2 μF
C 207	163-1063-30	16V 10 μF
C 208	176-5611-00	50V 560PF
C 209	176-5611-00	50V 560PF
C 210	176-5611-00	50V 560PF
C 211	178-2232-05	25V 0.022 μF
C 212	178-2232-05	25V 0.022 μF
C 213	178-1032-05	25V 0.01 μF
C 215	178-1042-05	25V 0.1 μF
C 216	163-3343-60	50V 0.33 μF
C 217	176-1201-00	50V 12PF
C 218	176-1201-00	50V 12PF
C 219	163-2253-60	50V 2.2 μF
C 220	178-1012-05	50V 100PF
C 221	178-1012-05	50V 100PF
C 222	178-1012-05	50V 100PF
C 223	178-1012-05	50V 100PF
C 225	183-4763-32	16V 47 μF
C 226	178-1042-05	25V 0.1 μF
C 305	178-1022-05	50V 1000PF
C 306	178-1022-05	50V 1000PF
C 307	178-1022-05	50V 1000PF
C 308	178-1022-05	50V 1000PF
C 309	178-1022-05	50V 1000PF
C 310	178-1022-05	50V 1000PF
C 311	178-1032-05	25V 0.01 μF
C 330	163-1063-30	16V 10 μF
C 409	163-2253-60	50V 2.2 μF
C 410	163-2253-60	50V 2.2 μF
C 503	178-1032-05	25V 0.01 μF
C 504	183-4763-32	16V 47 μF
C 505	178-4732-05	25V 0.047 μF
C 506	178-1032-05	25V 0.01 μF
C 507	183-1073-22	10V 100 μF
C 509	178-4732-05	25V 0.047 μF
C 602	183-1073-22	10V 100 μF
C 603	178-1032-05	25V 0.01 μF
C 604	163-1063-30	16V 10 μF
C 605	183-4763-32	16V 47 μF

REF No.	PART No.	DESCRIPTION
C 606	163-1063-30	16V 10 μF
C 607	172-1031-10	50V 0.01 μF
C 608	178-1032-05	25V 0.01 μF
C 610	178-1032-05	25V 0.01 μF
C 620	183-4763-32	16V 47 μF
C 701	163-1063-30	16V 10 μF
C 702	163-2253-60	50V 2.2 μF
C 703	178-4732-05	25V 0.047 μF
C 704	163-2253-60	50V 2.2 μF
C 705	163-1063-30	16V 10 μF
C 706	183-1073-22	10V 100 μF
C 707	176-5601-00	50V 56PF
C 708	176-1511-00	50V 150PF
C 709	163-4753-50	35V 4.7 μF
C 710	178-8232-05	25V 0.082 μF
C 711	163-2253-60	50V 2.2 μF
C 712	163-2263-10	6.3V 22 μF
C 713	178-5622-05	50V 5600PF
C 714	178-5632-05	25V 0.056 μF
C 715	178-5622-05	50V 5600PF
C 716	163-1063-30	16V 10 μF
C 717	176-5601-00	50V 56PF
C 718	176-1511-00	50V 150PF
C 719	163-4753-50	35V 4.7 μF
C 720	178-8232-05	25V 0.082 μF
C 721	163-2253-60	50V 2.2 μF
C 722	163-2263-10	6.3V 22 μF
C 723	178-5622-05	50V 5600PF
C 724	178-5632-05	25V 0.056 μF
C 725	178-5622-05	50V 5600PF
C 726	163-1063-30	16V 10 μF
C 727	183-4763-32	16V 47 μF
C 799	178-1032-05	25V 0.01 μF
C 801	176-1011-00	50V 100PF
C 802	176-1011-00	50V 100PF
C 803	176-1011-00	50V 100PF
C 804	176-1011-00	50V 100PF
C 806	163-1063-30	16V 10 μF
C 807	163-2243-60	50V 0.22 μF
C 808	163-2243-60	50V 0.22 μF
C 809	183-4763-32	16V 47 μF
C 811	178-4742-78	25V 0.47 μF
C 812	163-1063-30	16V 10 μF
C 813	163-2243-60	50V 0.22 μF
C 814	163-2243-60	50V 0.22 μF
C 816	172-1041-10	50V 0.1 μF
C 817	042-0447-00	16V 2200 μF
C 819	163-1063-30	16V 10 μF
C 820	163-1063-30	16V 10 μF
R 101	117-7531-10	1/10W 75KΩ
R 102	117-1831-10	1/10W 18KΩ
R 103	117-1021-10	1/10W 1KΩ

REF No.	PART No.	DESCRIPTION
R 104	117-5631-10	1/10W 56KΩ
R 105	117-1231-10	1/10W 12KΩ
R 106	117-1021-10	1/10W 1KΩ
R 107	117-2231-10	1/10W 22KΩ
R 108	117-4721-10	1/10W 4.7KΩ
R 109	117-2241-10	1/10W 220KΩ
R 110	117-1031-10	1/10W 10KΩ
R 111	117-2221-10	1/10W 2.2KΩ
R 112	117-1031-10	1/10W 10KΩ
R 113	117-1031-10	1/10W 10KΩ
R 114	117-2221-10	1/10W 2.2KΩ
R 115	117-2221-10	1/10W 2.2KΩ
R 116	117-1231-10	1/10W 12KΩ
R 117	117-2711-10	1/10W 270Ω
R 118	117-3311-10	1/10W 330Ω
R 203	117-2221-10	1/10W 2.2KΩ
R 205	117-3321-10	1/10W 3.3KΩ
R 206	117-2231-10	1/10W 22KΩ
R 207	117-1031-10	1/10W 10KΩ
R 208	117-1231-10	1/10W 12KΩ
R 209	117-3331-10	1/10W 33KΩ
R 210	117-1021-10	1/10W 1KΩ
R 211	117-2211-10	1/10W 220Ω
R 212	117-1041-10	1/10W 100KΩ
R 213	117-2221-10	1/10W 2.2KΩ
R 214	117-1021-10	1/10W 1KΩ
R 215	117-1021-10	1/10W 1KΩ
R 216	117-1021-10	1/10W 1KΩ
R 217	117-1021-10	1/10W 1KΩ
R 218	117-1031-10	1/10W 10KΩ
R 219	117-1031-10	1/10W 10KΩ
R 220	117-1031-10	1/10W 10KΩ
R 301	111-6811-81	1/2WS 680Ω
R 302	117-1031-10	1/10W 10KΩ
R 303	111-2211-81	1/2WS 220Ω
R 503	117-4721-10	1/10W 4.7KΩ
R 504	117-5621-10	1/10W 5.6KΩ
R 505	117-1031-10	1/10W 10KΩ
R 506	117-1031-10	1/10W 10KΩ
R 507	117-1021-10	1/10W 1KΩ
R 508	117-1031-10	1/10W 10KΩ
R 509	117-1031-10	1/10W 10KΩ
R 510	117-1031-10	1/10W 10KΩ
R 511	117-1031-10	1/10W 10KΩ
R 512	117-1031-10	1/10W 10KΩ
R 513	117-1031-10	1/10W 10KΩ
R 514	117-1031-10	1/10W 10KΩ
R 515	117-1031-10	1/10W 10KΩ
R 516	117-4731-10	1/10W 47KΩ
R 517	117-2231-10	1/10W 22KΩ
R 518	117-1021-10	1/10W 1KΩ
R 519	117-1031-10	1/10W 10KΩ

REF No.	PART No.	DESCRIPTION
R 520	117-1041-10	1/10W 100KΩ
R 521	117-1021-10	1/10W 1KΩ
R 522	117-1021-10	1/10W 1KΩ
R 523	117-1021-10	1/10W 1KΩ
R 524	117-1021-10	1/10W 1KΩ
R 525	117-1021-10	1/10W 1KΩ
R 526	117-1021-10	1/10W 1KΩ
R 527	117-1021-10	1/10W 1KΩ
R 528	111-1001-91	1/4WSS 10Ω
R 529	117-1021-10	1/10W 1KΩ
R 530	117-1011-10	1/10W 100Ω
R 598	117-1041-10	1/10W 100KΩ
R 599	117-2231-10	1/10W 22KΩ
R 601	117-1021-10	1/10W 1KΩ
R 602	117-1031-10	1/10W 10KΩ
R 603	117-2231-10	1/10W 22KΩ
R 604	117-1231-10	1/10W 12KΩ
R 605	117-1021-10	1/10W 1KΩ
R 606	111-2291-91	1/4WSS 2.2Ω
R 607	111-2291-91	1/4WSS 2.2Ω
R 608	111-4711-91	1/4WSS 470Ω
R 609	111-2291-91	1/4WSS 2.2Ω
R 610	111-2291-91	1/4WSS 2.2Ω
R 612	117-1041-10	1/10W 100KΩ
R 613	117-1041-10	1/10W 100KΩ
R 614	111-5611-91	1/4WSS 560Ω
R 615	117-1031-10	1/10W 10KΩ
R 616	117-1031-10	1/10W 10KΩ
R 617	111-1591-91	1/4WSS 1.5Ω
R 618	111-1591-91	1/4WSS 1.5Ω
R 619	111-1591-91	1/4WSS 1.5Ω
R 620	111-1591-91	1/4WSS 1.5Ω
R 621	117-1031-10	1/10W 10KΩ
R 622	111-2221-91	1/4WSS 2.2KΩ
R 623	117-1031-10	1/10W 10KΩ
R 624	111-1221-91	1/4WSS 1.2KΩ
R 625	117-4721-10	1/10W 4.7KΩ
R 626	117-2231-10	1/10W 22KΩ
R 629	117-1531-10	1/10W 15KΩ
R 630	111-4711-91	1/4WSS 470Ω
R 633	117-1041-10	1/10W 100KΩ
R 700	117-1021-10	1/10W 1KΩ
R 701	117-4731-10	1/10W 47KΩ
R 702	117-6831-10	1/10W 68KΩ
R 703	117-6821-10	1/10W 6.8KΩ
R 704	117-1231-10	1/10W 12KΩ
R 705	117-4721-10	1/10W 4.7KΩ
R 706	117-2431-10	1/10W 24KΩ
R 707	117-6821-10	1/10W 6.8KΩ
R 708	117-4731-10	1/10W 47KΩ
R 709	117-6831-10	1/10W 68KΩ
R 710	117-6821-10	1/10W 6.8KΩ

REF No.	PART No.	DESCRIPTION
R 711	117-1231-10	1/10W 12KΩ
R 712	117-4721-10	1/10W 4.7KΩ
R 713	117-2431-10	1/10W 24KΩ
R 714	117-6821-10	1/10W 6.8KΩ
R 715	111-3311-91	1/4WSS 330Ω
R 797	117-1031-10	1/10W 10KΩ
R 798	117-1031-10	1/10W 10KΩ
R 799	117-1021-10	1/10W 1KΩ
R 801	117-7521-10	1/10W 7.5KΩ
R 802	117-4721-10	1/10W 4.7KΩ
R 804	117-7521-10	1/10W 7.5KΩ
R 805	117-4721-10	1/10W 4.7KΩ

REF No.	PART No.	DESCRIPTION
R 807	117-7521-10	1/10W 7.5KΩ
R 808	117-4721-10	1/10W 4.7KΩ
R 810	117-7521-10	1/10W 7.5KΩ
R 812	117-4721-10	1/10W 4.7KΩ
R 813	117-3321-10	1/10W 3.3KΩ
R 814	117-4721-10	1/10W 4.7KΩ
R 815	117-4721-10	1/10W 4.7KΩ
R 816	117-4721-10	1/10W 4.7KΩ
R 817	117-4721-10	1/10W 4.7KΩ
R 819	117-4721-10	1/10W 4.7KΩ
R 822	117-1031-10	1/10W 10KΩ
R 823	117-1031-10	1/10W 10KΩ

REF No.	PART No.	DESCRIPTION
R 824	117-3311-10	1/10W 330Ω
R 825	117-3311-10	1/10W 330Ω
R 826	117-5621-10	1/10W 5.6KΩ
R 827	117-5621-10	1/10W 5.6KΩ
R 998	117-1031-10	1/10W 10KΩ
SUP101	060-0122-10	DSP-201M-S00B
CN 101	074-1217-00	OUTLETSOCKET
CN 102	074-1115-00	OUTLETSOCKET
CN 105	074-1126-10	OUTLETSOCKET
CN 106	074-0986-22	OUTLETSOCKET
FUSE	060-0057-57	AUTO-FUSE(15A)

Switch PWB (B1) section

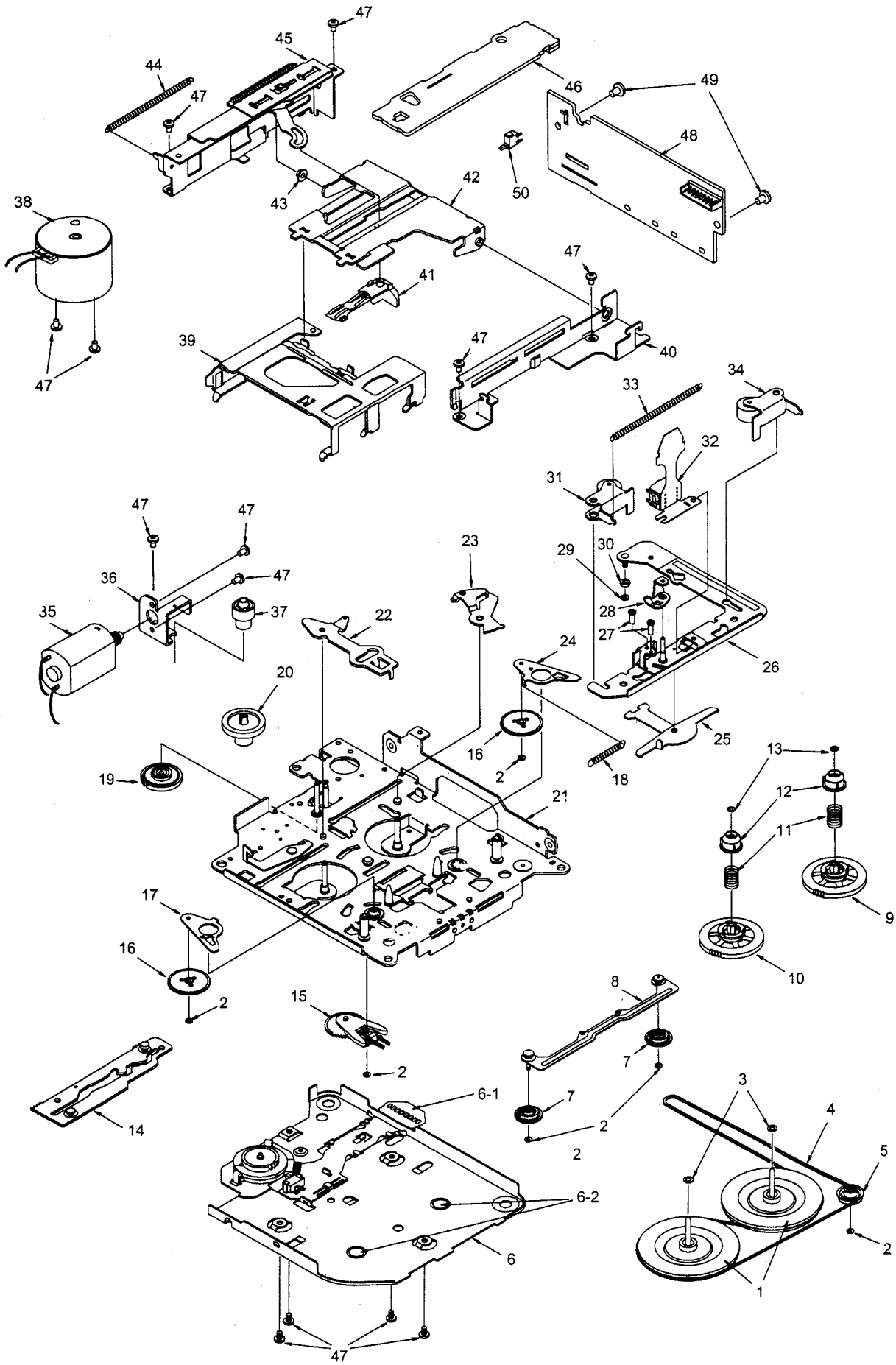
REF No.	PART No.	DESCRIPTION
IC 101	051-6013-00	LC75854W
C 101	178-1022-05	50V 1000PF
C 102	178-4732-05	25V 0.047μF
C 103	178-4732-05	25V 0.047μF
C 104	178-4732-05	25V 0.047μF
C 105	042-0416-51	6.3V 10μF
R 101	117-2221-10	1/10W 2.2KΩ
R 102	117-2221-10	1/10W 2.2KΩ
R 103	117-2221-10	1/10W 2.2KΩ
R 104	117-4731-10	1/10W 47KΩ
R 105	117-1031-10	1/10W 10KΩ
R 106	117-1241-10	1/10W 120KΩ
R 107	117-3921-10	1/10W 3.9KΩ
R 108	117-1011-10	1/10W 100Ω

REF No.	PART No.	DESCRIPTION
CN 101	076-0615-00	PLUG
PL 101	017-0441-00	9V 85mA
PL 102	017-0441-00	9V 85mA
PL 103	017-0410-00	14V 40mA
PL 104	017-0410-00	14V 40mA
PL 105	017-0410-00	14V 40mA
PL 106	017-0410-00	14V 40mA
S 101	013-6305-00	TACT SWITCH
S 102	013-6001-00	SWITCH
S 103	013-6305-00	TACT SWITCH
S 104	013-6305-00	TACT SWITCH
S 105	013-6305-00	TACT SWITCH
S 106	013-6305-00	TACT SWITCH
S 107	013-6305-00	TACT SWITCH

REF No.	PART No.	DESCRIPTION
S 109	013-6305-00	TACT SWITCH
S 110	013-6305-00	TACT SWITCH
S 110	013-6001-00	SWITCH
S 111	013-6305-00	TACT SWITCH
S 112	013-6305-00	TACT SWITCH
S 113	013-6305-00	TACT SWITCH
S 114	013-6305-00	TACT SWITCH
S 115	013-6305-00	TACT SWITCH
S 116	013-6305-00	TACT SWITCH
S 117	013-6305-00	TACT SWITCH
S 118	013-6305-00	TACT SWITCH
S 119	013-6305-00	TACT SWITCH
IR 101	060-4008-00	RS-170

■ EXPLODED VIEW:

Tape mechanism section 930-0798-80



■ PARTS LIST:

Tape mechanism section 930-0798-80

Note) Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.

NO.	PART NO.	DESCRIPTION	Q'TY
1	611-0091-03	FLYWHEEL	2
2	746-0724-00	WASHER	6
3	746-0624-00	WASHER	2
4	602-0118-00	BELT	1
5	604-0046-00	TENTION PULLEY	1
6	960-4450-00	BOTTOM SUB ASSY	1
6-1	099-9926-01	BOTTOM FLEX-PWB (WITHOUT COMPONENT)	1
6-2	746-0767-00	WASHER	2
7	613-0286-02	FF/REW GEAR	2
8	960-4262-03	FF/REW PLATE ASSY	1
9	960-4430-00	REEL ASSY F	1
10	960-4431-00	REEL ASSY R	1
11	750-2949-00	SLIDE SPRING	2
12	631-1993-01	SLIDE BUSH	2
13	746-0761-00	WASHER	2
14	960-4266-20	MODE POLATE ASSY	1
15	960-4282-06	DETECT SUB ASSY	1
16	613-0662-00	IDLER GEAR	2
17	960-4264-03	IDOLER PLATE ASSY R	1
18	750-3017-02	IDLER SPRING	1
19	613-0337-00	POWER GEAR	1
20	613-0289-01	GEAR A	1
21	960-4294-22	DECK PLATE ASSY	1
22	960-4301-02	PLAY LINK ASSY	1
23	630-2598-05	EJECT LINK	1
24	960-4263-03	IDOLER PLATE ASSY F	1
25	630-2597-01	CHANGE LINK	1

NO.	PART NO.	DESCRIPTION	Q'TY
26	960-4261-20	HEAD PLATE ASSY	1
27	716-0833-10	AZIMUTH SCREW	2
28	630-2600-01	ADJUST LINK	1
29	746-0762-00	WASHER	1
30	610-0342-01	HADE PLATE ROLLER	1
31	960-4270-05	ROLLER ASSY R	1
32	011-0328-00	HEAD	1
33	750-2946-02	PINCH SPRING	1
34	960-4269-05	ROLLER ASSY F	1
35	SMA-131-100	POWER MOTOR ASSY	1
36	630-2601-02	MOTOR PLATE	1
37	613-0288-01	HELICAL GEAR	1
38	SMA-130-100	MAIN MOTOR ASSY	1
39	606-0093-82	PACK GUIDE	1
40	630-2626-05	PWB FRAME	1
41	631-1992-02	PACK STOPPER	1
42	630-2642-01	GUIDE ARM	1
43	610-0343-00	GUIDE A ROLLER	1
44	750-2947-04	EJECT PLATE SPRING	1
45	960-4389-20	EJECT SUB ASSY	1
46	039-0053-00	SIDE PWB (WITHOUT COMPONENT)	1
47	716-0484-00	SCREW	13
48	HBS-486-100	REAR PWB ASSY (WITH COMPONENT)	1
49	716-0761-01	PWB SCREW	2
50	013-3906-00	SWITCH	1

■ ELECTRICAL PARTS LIST:

Tape mechanism Side PWB (B3) section

Note) Several different parts of the same reference number are alternative parts.
One of those parts is used in the set.

REF No.	PART No.	DESCRIPTION
C 1	175-3311-00	330pF CH
C 2	175-3311-00	330pF CH
C 3	175-3311-00	330pF CH
C 4	175-3311-00	330pF CH
C 5	183-4763-11	6.3V 47 μ F
C 6	042-0552-02	10V 68 μ F
C 7	042-0552-02	10V 68 μ F
C 8	173-1231-10	0.012 μ F J
C 9	173-1231-10	0.012 μ F J
C 10	183-4753-51	35V 4.7 μ F
C 11	183-1043-61	50V 0.1 μ F
C 12	175-5611-00	560pF CH

REF No.	PART No.	DESCRIPTION
C 13	183-4743-61	50V 0.47 μ F
C 14	183-2263-31	16V 22 μ F
C 15	183-4753-51	35V 4.7 μ F
C 16	183-4753-51	35V 4.7 μ F
IC 1	051-1546-10	BA3430S
J 1	074-0881-08	8P
R 1	111-1241-91	1/4WS 120K Ω
R 2	111-1241-91	1/4WS 120K Ω
R 3	111-1241-91	1/4WS 120K Ω
R 4	111-1241-91	1/4WS 120K Ω
R 5	116-1011-10	1/8W 100 Ω
R 6	116-1011-10	1/8W 100 Ω

REF No.	PART No.	DESCRIPTION
R 7	117-3341-10	1/10W 330K Ω
R 8	117-1131-10	1/10W 11K Ω
R 9	117-1531-10	1/10W 15K Ω
R 10	117-1531-10	1/10W 15K Ω
R 11	117-1131-10	1/10W 11K Ω
R 12	117-3341-10	1/10W 330K Ω
R 13	117-1811-10	1/10W 180 Ω
R 14	117-8211-10	1/10W 820 Ω
R 15	116-2231-10	1/8W 22K Ω
R 16	117-1031-10	1/10W 10K Ω

Tape mechanism Rear PWB (B4) section

REF No.	PART No.	DESCRIPTION
C 101	177-1042-55	0.1 μ F
C 102	163-4763-30	16V 47 μ F
D 101	001-0595-17	MA5091

REF No.	PART No.	DESCRIPTION
IC 101	051-1014-05	TA7291F
P 101	076-0353-08	8P
R 101	116-2711-10	1/8W 270 Ω

REF No.	PART No.	DESCRIPTION
R 102	116-1031-10	1/8W 10K Ω
SW 101	013-3906-00	SPPB51

Tape mechanism Bottom PWB (B5) section

REF No.	PART No.	DESCRIPTION
REF301	051-1776-00	NJL5801K-C

REF No.	PART No.	DESCRIPTION
SW 301	013-3953-01	SPPB32

REF No.	PART No.	DESCRIPTION
SW 302	013-3951-00	HMW0605

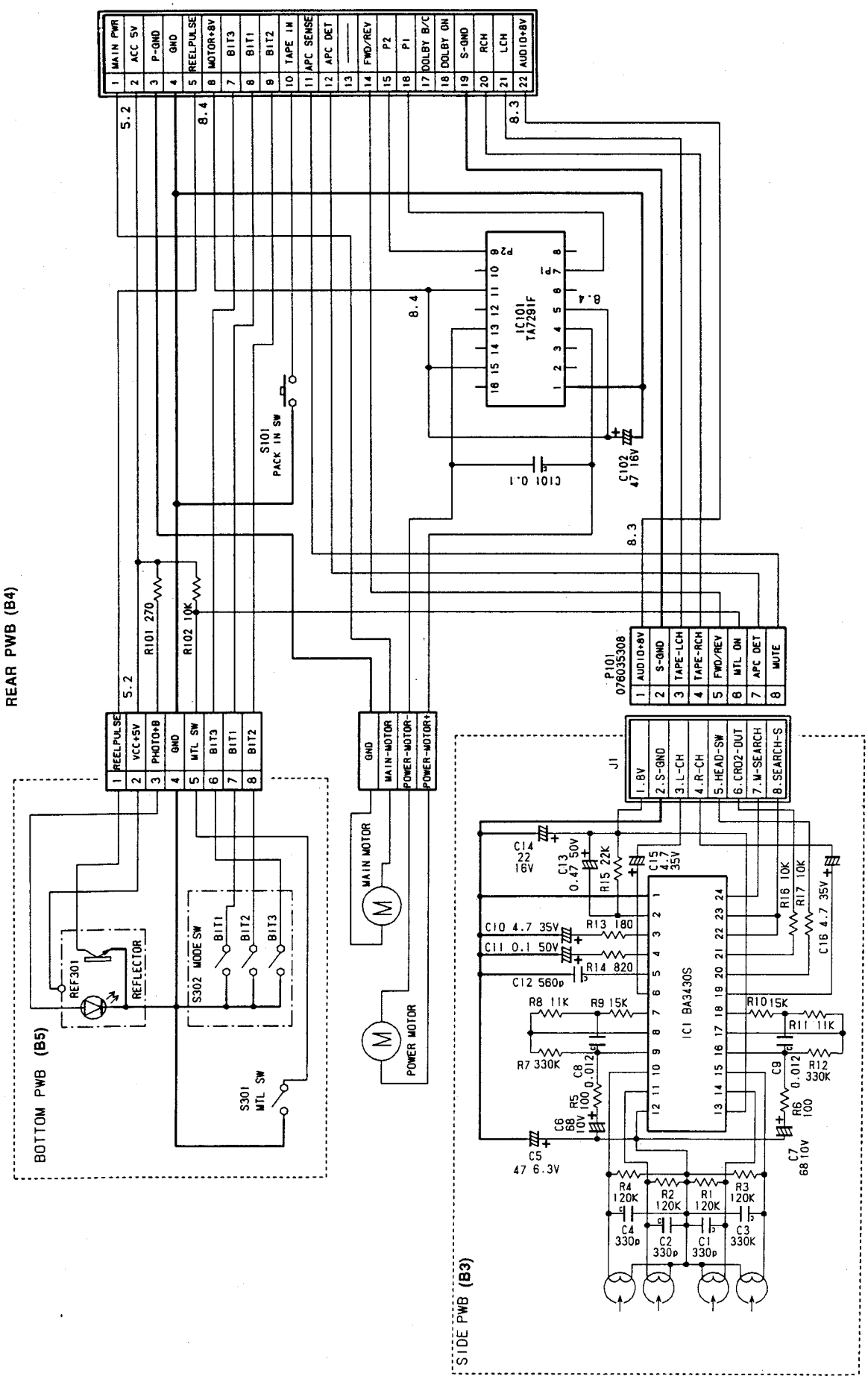
■ ADJUSTMENT

Tape mechanism

Item	Procedure	Measuring instrument
Azimuth adjustment	1.Playback a azimuth test tape(10KHz,— 10VU) and turn each azimuth-adjusting screw to make each FOW & REV Maximum. 2.After adjustment, make adhesion with bond.	Azimuth test tape Milli-volt meter
Tape speed	1.Playback a Wow & flutter test tape(3KHz,— 10VU) and connect the frequency counter to TP101(L) or TP102(R). 2.Adjust Speed VR of the motor to obtain an output of TP101(L), TP102(R) is 3000Hz ± 45Hz.	Wow & flutter test tape Frequency counter

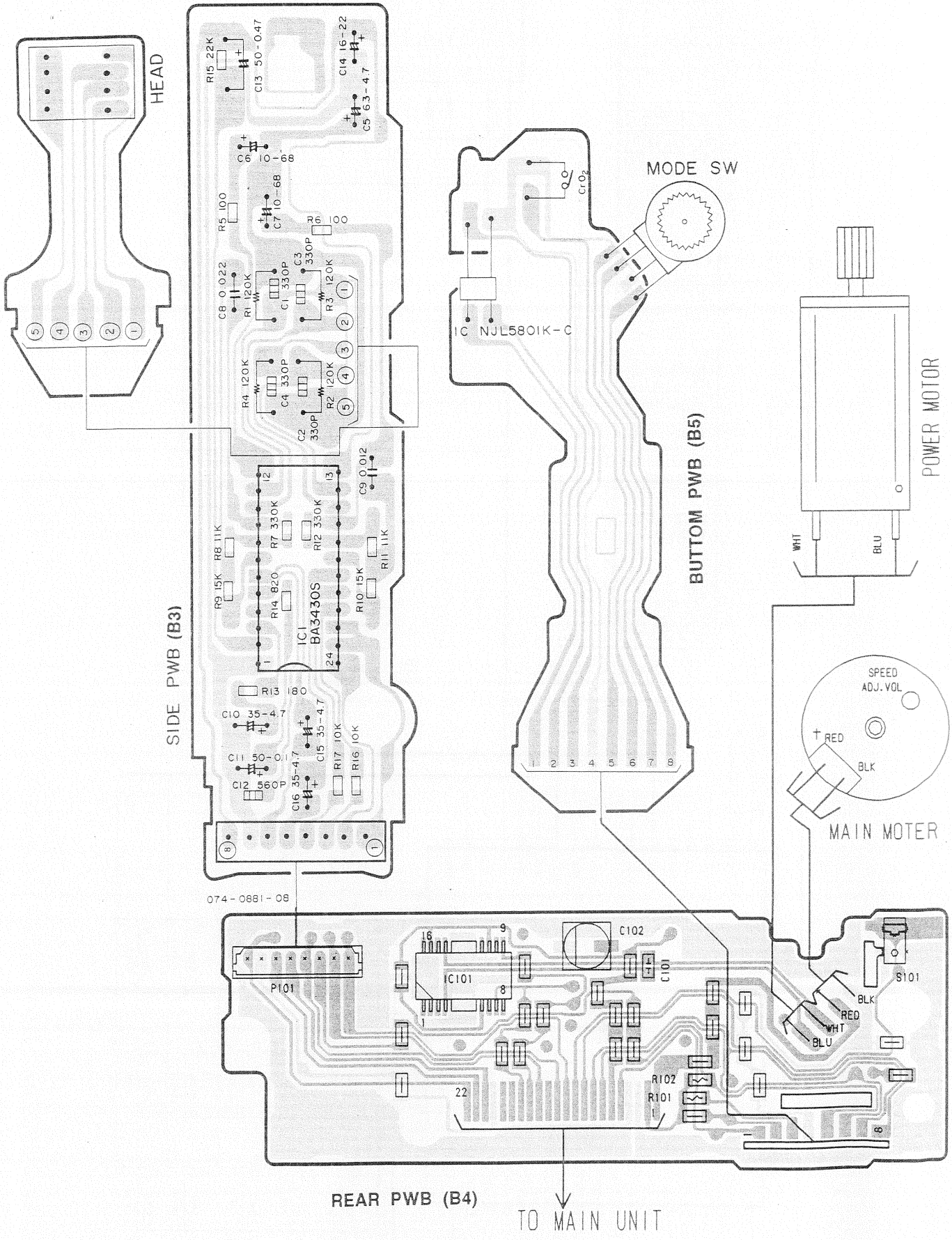
■ CIRCUIT DIAGRAM:

Tape mechanism section 930-0798-80



PRINTED WIRING BOARD:

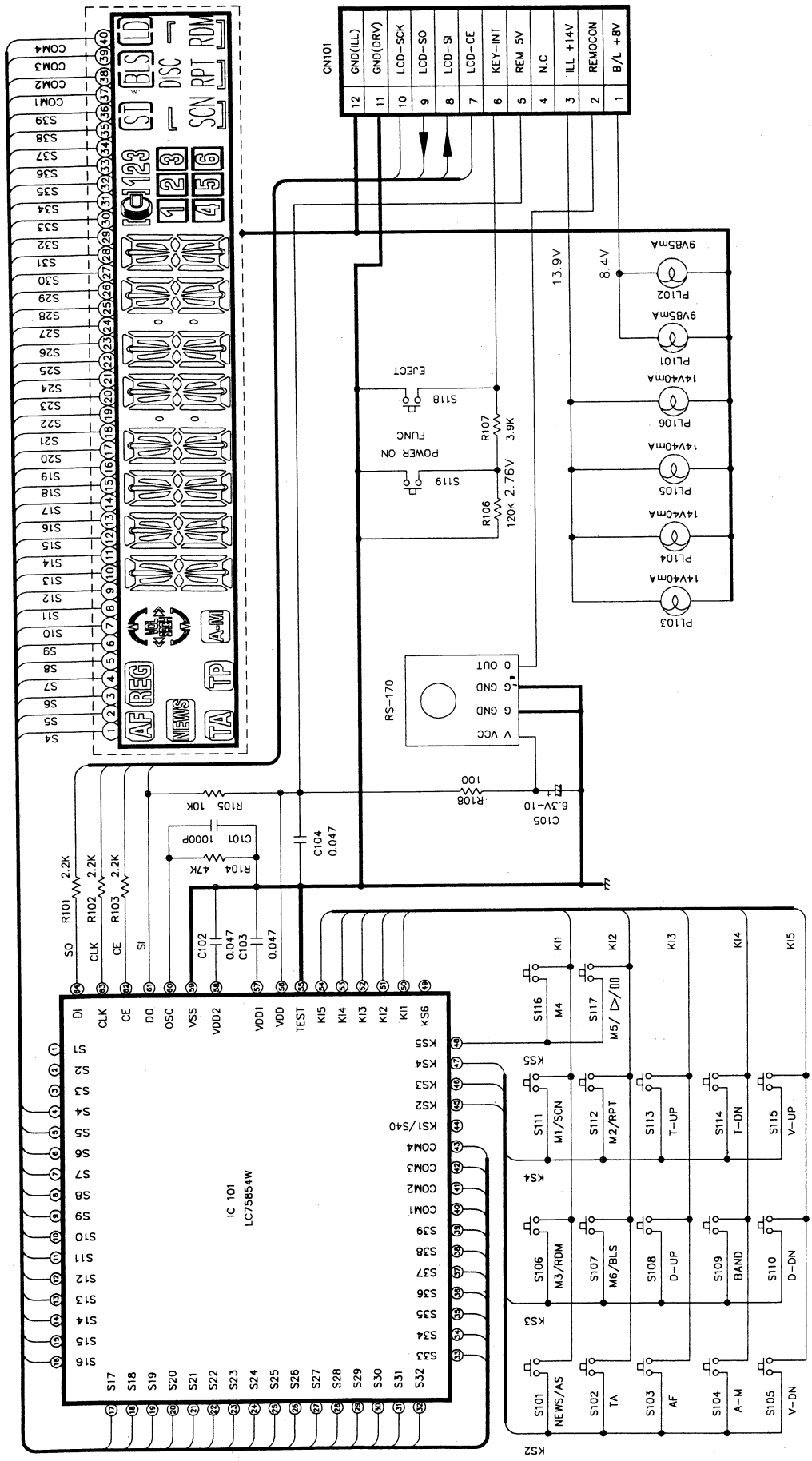
Tape mechanism section 930-0798-80



ARX457OR

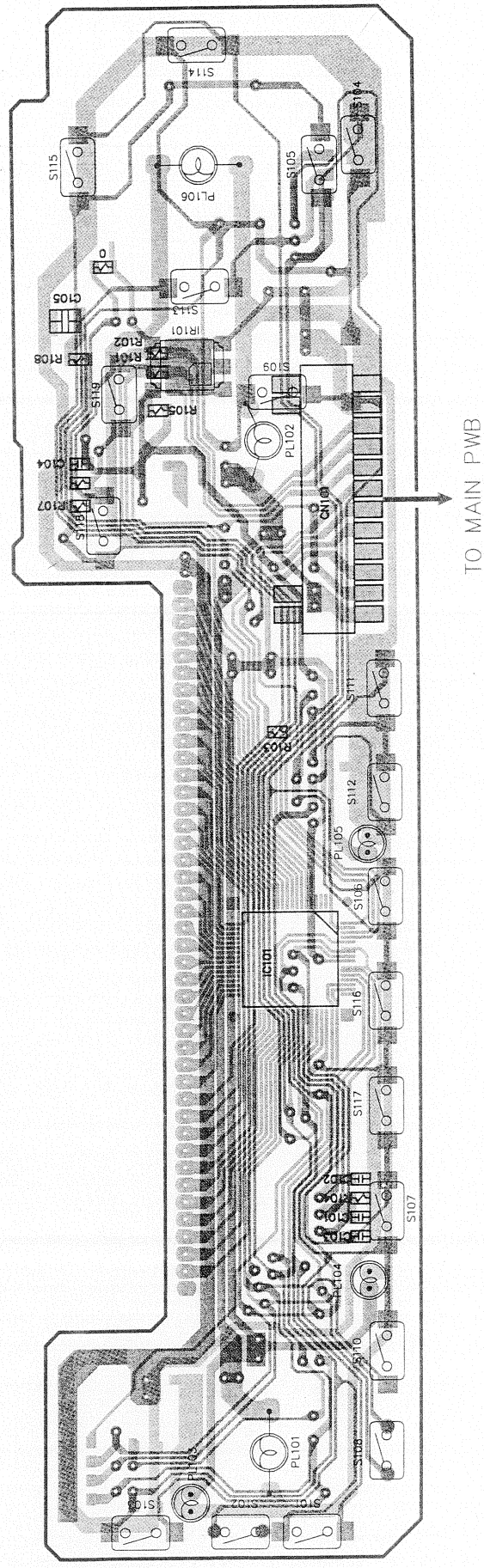
■ CIRCUIT DIAGRAM:

Switch PWB (B1) section



■ PRINTED WIRING BOARD:

Switch PWB (B1) section



ARX4570R

■ PRINTED WIRING BOARD:

Main PWB (B2) section

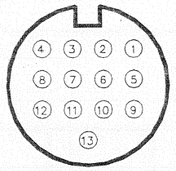
C-BUS LINE

CASE	SHIELD
1	SI/SO
2	SCK
3	-----
4	SRQ
5	+BREM
6	S-GND

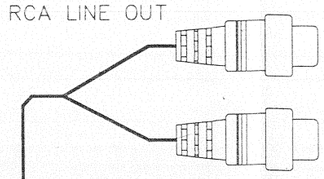
C-BUS LINE

7	CD-L-IN
8	CD-R-IN
9	-----
10	B/U
11	ACCCOUT
12	GND
13	-----

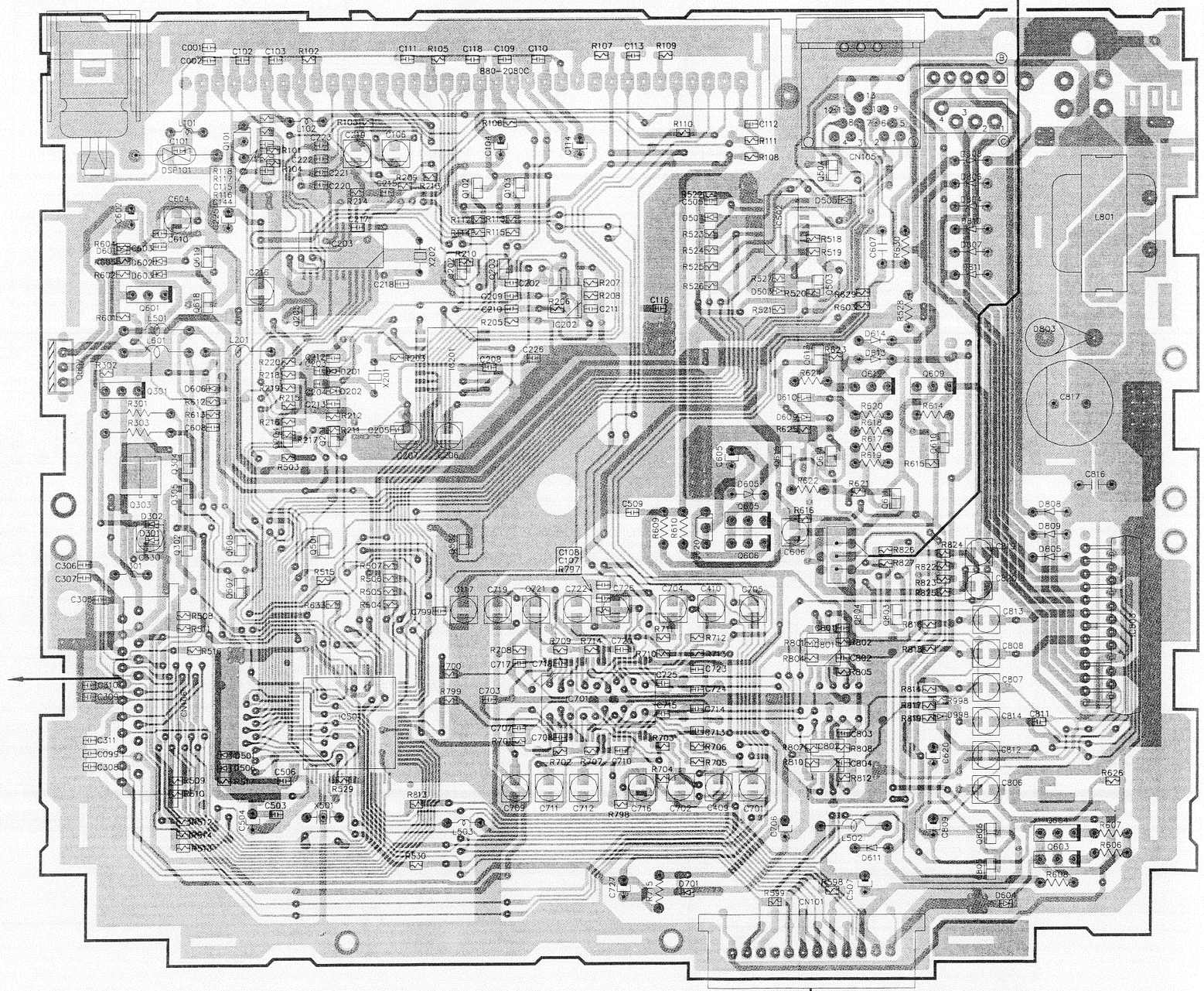
074-1126-10



855-5426-80
RCA LINE OUT

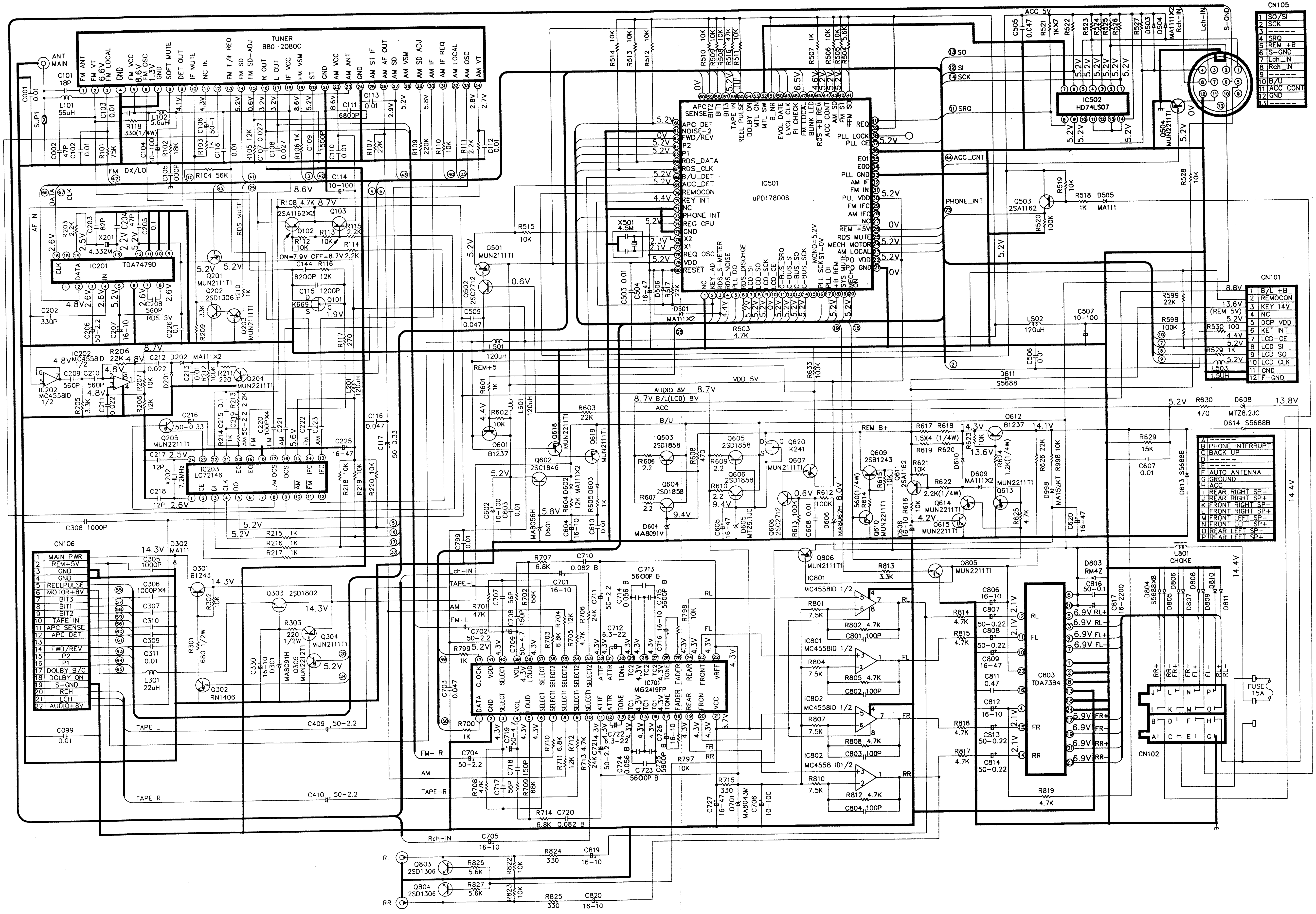


092-9000-41



■ CIRCUIT DIAGRAM:

Main PWB (B2) section



TUNER
880-2080C
ANT MAIN
IC201 TDA7479D
IC202 MC4558ID 1/2
IC203 LC72146
IC501 uPD178006
IC502 HD74LS07
IC701 M62419FP
IC801 MC4558ID 1/2
IC802 MC4558ID 1/2
IC803 TDA7384
CN105
1 SO/SI
2 SCK
3 -----
4 SRQ
5 REM +B
6 S-GND
7 Lch_IN
8 Rch_IN
9 -----
10 B/U
11 ACC CONT
12 GND
13 -----
CN101
1 B/L +B
2 REMOCON
3 KEY 14V
4 NC
5 DCP VDD
6 KET INT
7 LCD-CE
8 LCD SI
9 LCD SO
10 LCD CLK
11 GND
12 F-GND
CN106
1 MAIN PWR
2 REM+5V
3 GND
4 GND
5 REELPULSE
6 MOTOR+8V
7 BIT3
8 BIT1
9 BIT2
10 TAPE IN
11 APC SENSE
12 APC DET
13
14 FWD/REV
15 P2
16 P1
17 DOLBY B/C
18 DOLBY ON
19 S-GND
20 RCH
21 LCH
22 AUDIO+8V
CN102
A -----
B PHONE INTERRUPT
C BACK UP
D -----
E -----
F AUTO ANTENNA
G GROUND
H ACC
I REAR RIGHT SP-
J REAR RIGHT SP+
K FRONT RIGHT SP-
L FRONT RIGHT SP+
M FRONT LEFT SP-
N FRONT LEFT SP+
O REAR LEFT SP-
P REAR LEFT SP+
FUSE 15A
L801 CHOKE
TAPE L
TAPE R
RL
RR

ARX4570R